APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/072,114	02/05/2002	Dan Kikinis	007287.00034	4131

22907   7590   12/21/2010
BANNER & WITCOFF, LTD.
1100 13th STREET, N.W.
SUITE 1200
WASHINGTON, DC 20005-4051

EXAMINER
MARANDI, JAMES R

ART UNIT	PAPER NUMBER
2421	

MAIL DATE	DELIVERY MODE
12/21/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	**Applicant(s)**
Office Action Summary	10/072,114	KIKINIS ET AL.
	Examiner	**Art Unit**	
	JAMES R. MARANDI	2421	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>27 September 2010</u>.

2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1,17,31 and 52-72</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1,17,31 and 52-72</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth
   in 37 CFR 1.17(e), was filed in this application after final rejection. Since this
   application is eligible for continued examination under 37 CFR 1.114, and the fee set
   forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action
   has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on
   9/27/2010 has been entered.

Information Disclosure Statement

2. The information disclosure statements (IDS) submitted on 6/08/2010 and 11/09/2010
   were filed after the mailing date of the final office action on 5/25/2010. In view of the
   Continued Examination request of 9/27/2010, the submission is in compliance with
   the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is
   eligible for consideration by the examiner.

Response to Amendment

3. This action is in response to applicant's amendment filed on 9/27/2010. Claims 1,

   17, 31 and 52- 72 are presently pending. Claims 2-16, 18- 30, and 32- 51 have been

   cancelled. Claims 65- 72 are newly presented.

Response to Arguments

4. Applicant's arguments filed on 9/27/2010 have been fully considered. As to rejection

   of claims 57 and 60 under 35 U.S.C § 112, first paragraph, applicant's arguments

   are persuasive, and said rejection is hereby withdrawn. However, arguments with

   respect to claims 1, 17, 31 and 52- 72 as to rejections under 35 U.S.C § 103 have

   been considered but are moot in view of the new ground(s) of rejection.

   Examiner has deployed a new ground of rejection, based on discovery of even more

   pertinent prior art. This does not mean that the applicant overcome the prior art of

   record with respect to Oosterhout and Cove.

   4.1. For example, with respect to claim 1, applicant argues that "***Oosterhout uses***

   only fixed sub images (i.e. snapshots), it does not teach or suggest capturing a

> *video stream, converting a video stream into reduced resolution thumbnails*
> *video stream, or displaying a reduced resolution thumbnail video stream".* Page
> 10 of Remarks, 3rd paragraph

Examiner disagrees. Oosterhout shows in Fig. 1 receiving multiple MPEG streams. Though Fig. 1 represent such streams at the headend along with a mosaic signal, Oosterhout discloses that such mosaic signal may be formed at the receiver (Col. 5, lines 24- 36). Furthermore, in Col. 2, lines 5-6, Oosterhout has incorporated by reference International Patent Application WO 95/28794 (copy of which is provided herewith for applicant's convenience). WO 95/28794 presents several embodiments of creating a mosaic signal, including Fig. 4 where low resolution images are disclosed. Furthermore, the thumbnails of Oosterhout are not necessarily just still images. Oosterhout discloses (Col. 1, lines 64-67) that such images are refreshed (real time, no refresh means still picture, whereas depending on refresh rate a lower resolution is provided).

4.2. As to Cove, the reference teaches the motivation and evidence that it was well known at the time of invention to use a multidimensional user interface, such as applicant's claimed polyhedron. As to combination of Oosterhout and Cove, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that

the claimed invention must be expressly suggested in any one or all of the

references. Rather, the test is what the combined teachings of the references

would have suggested to those of ordinary skill in the art. See *In re Keller*, 642

F.2d 413, 208 USPQ 871 (CCPA 1981). As described above, it would have been

obvious to one of ordinary skill in the art, at the time of invention, to modify the

system of Oosterhout (a two dimensional EPG menu comprising reduced

images of possible selections/ channels) with Cove's invention (<u>showing an

EPG/ Menu in three dimensional Polyhedron form, each side showing a

selectable item, such as what is shown in Fig. 6, whereby the invention of

Oosterhout, showing a reduced-image of the program is maintained</u>) in order to

enable the viewer to conveniently follow/monitor/navigate through multiple

programs at the same time (as taught by Oosterhout Col. 1, lines 31-35, and

Cove Col.1, lines 39-55).

4.3. As to Toklu, the reference was used specifically to teach what was not taught by

Oosterhout and Cove, and that was detection of scene changes and changes

based on image properties such as brightness, etc.

Claim Renumbering, Rule § 1.126

5.   There is a typographical error in the numbering of claims leading to two claim 68s.

As per MPEP, Rule § 1.126, claims 68 (duplicate) has been renumbered as claim

69.

Claim Rejections - 35 USC § 112

6.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the
> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
> set forth the best mode contemplated by the inventor of carrying out his invention.

6.1. Claims 65, 66, 68, and 69 are rejected under 35 U.S.C. 112, first paragraph, as

failing to comply with the written description requirement. The claim(s) contains

subject matter which was not described in the specification in such a way as to

reasonably convey to one skilled in the relevant art that the inventor(s), at the

time the application was filed, had possession of the claimed invention.

6.1.1. Claims 65, and 68 recite the <u>newly added</u> limitation *displaying plurality of*

graphical representations of polyhedrons in the individual image areas of the

electronic program guide, which has not been previously disclosed by the

applicant. Applicant's disclosure appears to have been limited to only one

representation of the polyhedron and nowhere a plurality of polyhedrons has

been disclosed.

6.1.2. Claims 66, and 69 depend on claims 65 and 68 respectively and are so

rejected.

Claim Rejections - 35 USC § 101

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
conditions and requirements of this title.

7.1. Claims 31, 64, 71, and 72 are rejected under 35 U.S.C. 101 because the

claimed invention is directed to non-statutory subject matter.

With respect to claim 31, applicant recites "computer-readable media storing

computer-executable instructions". Said computer-readable media covers forms

of non-transitory tangible media and transitory propagating signals. Furthermore,

the specification does not preclude "transitory propagating signals".

The United States Patent and Trademark Office (USPTO) is obliged to give

claims their broadest reasonable interpretation consistent with the specification

during proceedings before the USPTO. *See In re Zeltz*, 893 F.2d 319 (Fed. Cir.

1989). The broadest reasonable interpretation of a claim drawn to computer

readable medium typically covers forms of non-transitory tangible media and

transitory propagating signals per se in view of the ordinary and customary

meaning of computer readable media, particularly when the specification is silent.

See MPEP 2111.01.

A claim drawn to such a computer readable medium that covers both transitory

and non-transitory embodiments may be amended to narrow the claim to cover

only statutory embodiment to avoid a rejection under 35 U.S.C. § 101 by adding

the limitation "non-transitory" to the claim. *Cf. Animals- Patentability, 1077 Off.*

Gaz. Pat. Office 24 (April 21, 1987). Such an amendment would typically not

raise the issue of new matter, even when the specification is silent because the

broadest reasonable interpretation relies on the ordinary and customary meaning

that includes signals *per se.* See Director Kappos' January 26th, 2010 memo.

7.1.1. Claims 64, 71, and 72 depends on Claim 31 are rejected by the same

analysis.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

    obviousness rejections set forth in this Office action:

    (a) A patent may not be obtained though the invention is not identically disclosed or described as set
    forth in section 102 of this title, if the differences between the subject matter sought to be patented and
    the prior art are such that the subject matter as a whole would have been obvious at the time the
    invention was made to a person having ordinary skill in the art to which said subject matter pertains.
    Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 1, 17, 31, 53, and 55-64 are rejected under 35 U.S.C. 103(a) as being

    unpatentable over Florin et al., USPN 5,583,560 (hereinafter "Florin") in view of

    Freach et al., USPN 6,710,788 (hereinafter "Freach").

    9.1. Regarding claim 1, Florin discloses **a method** (Abstract) **comprising:**

    providing a plurality of individual image areas in an electronic

    program guide (EPG) display (User interfaces shown in Fig. 28, image area

    365 along with a menu/ program selection areas 360 and 315, Col. 18, lines 47-

    63; the user is enabled to select multiple programs for presentation as shown in

    Figs. 33- 35; Col. 20 lines 20- 67. The user is enabled to have multiple views of

    the EPG. Starting from a view as in Fig. 28 and selecting programs to be shown

    as in Fig. 33 with multiple images for simultaneous viewing of several programs);

receiving a plurality of video streams corresponding to video programming channels (Fig. 1, Service provider 50)

detecting a first video stream corresponding to a first selected video programming channel (selections via 60, through 54 modules 62/ 66, as implemented through tuner 67 and switch 69 of module 54 and of Fig. 2; as detected by the tuner, See Col. 8, line 19 through Col. 10 line 32)**;**

capturing a first portion of the first video stream (the video stream is captured and presented as shown in Fig. 28, 365. Multiple selections/ channels are shown in Fig. 33, showing multiple captured streams as displayed on screen. Upon selection of a channel, the stream is detected and decoded in real time and fed to the EPG, as such at time of selection, the start of the detected stream is the first portion of the video stream);

converting the first snapshot captured portion of the first video stream into a first reduced resolution thumbnail video stream (Fig. 33, 380, which is a grab capture of predetermined number of frames as disclosed in Col. 20, lines 20- 67);

displaying a graphical representation of multiple channels in **the individual image area** (as in Fig. 33)**; and**

displaying the first reduced resolution thumbnail video stream in the first of the individual image areas (as described above for Fig. 33).

Florin discloses a two dimensional electronic user interface in Fig. 33 where

multiple videos (applications) are presented to the viewer. Florin is silent on:

displaying a graphical representation of a polyhedron,

displaying the reduced image **on a side of the graphical representation**

of the polyhedron

However, Freach discloses an electronic user interface, where the user in

enabled to convert a two dimensional user interface to multi-dimensions by:

displaying a graphical representation of a polyhedron(Figs. 2, 44),

displaying the reduced image (application) **on a side of the graphical**

representation of the polyhedron (Fig. 2, Application window A is mapped to

the side of the Polyhedron). Col. 4, lines 10-59

Therefore, it would have been obvious to one of ordinary skill in the art, at the

time of invention, to modify the system of Florin with Freach's invention in order

to enable the viewer to conveniently follow/monitor/navigate through multiple

programs at the same time.

9.1.1. Regarding claim 53, the system of Florin and Freach discloses **displaying**

the graphical representation of the polyhedron comprises rendering a

plurality of reduced resolution thumbnail video streams on different
sides of the polyhedron (As shown in Fig. 2 of Freach, different sides of
the polyhedron 44 render different applications A,B,C which are the
disclosed video streams of Florin) Wherein each of the plurality of
reduced resolution thumbnail video streams corresponds to a different
channel (as tuned by the tuner of Florin), and wherein the different sides
of the polyhedron are rendered on different portions of the electronic
programming guide (EPG) display, the different portions being
simultaneously visible and having different sizes and shapes in the
electronic programming guide (EPG) display (As shown in Fig. 2,
polyhedron 44 depicts the program channels as disclosed by Florin, while
various area of the EPG (display 40 of Florin) may show other components/
programs.

9.1.2. Regarding claim 56, the system of Florin and Freach discloses wherein
each side of the polyhedron corresponds to a different video channel
having a different video stream (as analyzed for claims 1, and 53; The
sides A,B,C of Freach's Fig. 2 are mapped with the video application of
Florin) , the method further comprising:

receiving a user command to rotate the graphical representation
of the polyhedron (as shown in Freach's Fig. 6, the polyhedron is rotated
on command; Col. 5, line 38 through Col. 6, line 13); and

updating the EPG display by rotating the graphical
representation of the polyhedron so that one of the different selected
channels is displayed in the first of the individual image areas (which in
turn updates representation of the polyhedron in Fig. 2 and all are updated.
For example, side 46b of the polyhedron will be rendered with program D as
in Fig. 6b, showing the rotation from left to right from Fig. 6a).

9.1.2.1.   Regarding claim 57, the system of Florin and Freach discloses
wherein each of the different video channels corresponding to the
different sides of the polyhedron is a video channel selected by a
user for displaying on the polyhedron, and wherein the video
channels selected for displaying on the polyhedron are a subset of
a larger number of video channels available to the user via the
electronic programming guide (Florin's Fig. 33 shows channels
selected by the user, e.g. user's favorites, to be shown simultaneously
from the universe of channels available on the EPG; See Col.20, lines
55- 62. This user interface is mapped to Freach's polyhedron
representation as analyzed for claim 1).

9.1.2.2.   Regarding claim 58, the system of Florin and Freach discloses

wherein each of the different video channels corresponding to the

different sides of the polyhedron is a preselected video channel

selected by a head-end administrator of the electronic

programming guide (Florin's Fig. 33 is also enabled to show a

category of programs preselected by the provider; Col. 20, lines 28- 31

and lines 51- 55. This user interface is mapped to Freach's polyhedron

representation as analyzed for claim 1).

9.1.3. Regarding claim 62, the system of Florin and Freach discloses:

receiving a user command to perform at least one of moving

the graphical representation of the polyhedron and resizing the

graphical representation of the polyhedron (as shown in Freach: Fig.

4, the polyhedron can be moved to different areas of the workspace/ EPG;

Col. 5, lines 19- 37)**; and**

updating the EPG display in response to the user command

(any such movements will update the EPG display with the new

coordinate information)**, the updating comprising at least one of:**

moving the graphical representation of the polyhedron

to a different one of the individual image areas (Freach: Fig. 4,

as analyzed above) **in the display of the electronic**

programming guide, and

> **changing the size of the graphical representation of the**

polyhedron within the display of the electronic programming

guide (Freach further teaches that the size of the Polyhedron my

be changed/ customized as shown in Fig. 7d, 72; Col. 6 line 32

through Col. 7, line10) .

9.2. Regarding claim 17, Florin discloses **an apparatus** (Abstract, Figs. 1 and 2)

comprising:

> **a tuner configured to tune to a selected channel and to receive a**

video stream (Fig. 2, tuner 67, receiving video streams from 52)**; and**

> **an electronic programming guide component** (main module 62,

producing EPG as shown in Fig. 28) **configured to:**

> **display an electronic programming guide (EPG) comprising a**

plurality of individual image areas (User interfaces shown in Fig. 28, image

area 365 along with a menu/ program selection areas 360 and 315, Col. 18, lines

47- 63; the user is enabled to select multiple programs for presentation as shown

in Figs. 33- 35; Col. 20 lines 20- 67. The user is enabled to have multiple views

of the EPG. Starting from a view as in Fig. 28 and selecting programs to be

shown as in Fig. 33 with multiple images for simultaneous viewing of several

programs);

**receive a plurality of video streams corresponding to video
programming channels** (Fig. 1, Service provider 50)

**detect a first video stream corresponding to a first selected video
programming channel** (selections via 60, through 54 modules 62/ 66, as
implemented through tuner 67 and switch 69 of module 54 and of Fig. 2; as
detected by the tuner, See Col. 8, line 19 through Col. 10 line 32);

capture a first portion of the first video stream (the video stream is
captured and presented as shown in Fig. 28, 365. Multiple selections/ channels
are shown in Fig. 33, showing multiple captured streams as displayed on screen.
Upon selection of a channel, the stream is detected and decoded in real time and
fed to the EPG, as such at time of selection, the start of the detected stream is
the first portion of the video stream.);

**convert the first captured portion of the first video stream into a first
reduced resolution thumbnail video stream** (Fig. 33, 380, which is a grab
capture of predetermined number of frames as disclosed in Col. 20, lines 20- 67);

display a graphical representation of multiple channels in **the
individual image area** (as in Fig. 33)**; and**

**display the first reduced resolution thumbnail video stream in the
first of the individual image areas** (as described above for Fig. 33).

Florin discloses a two dimensional electronic user interface in Fig. 33 where
multiple videos (applications) are presented to the viewer. Florin is silent on:

> **displaying a graphical representation of a polyhedron**,
>
> displaying the reduced image **on a side of the graphical representation
> of the polyhedron**

However, Freach discloses an electronic user interface, where the user in

enabled to convert a two dimensional user interface to multi-dimensions by:

> **displaying a graphical representation of a polyhedron**(Figs. 2, 44),
>
> displaying the reduced image (application) **on a side of the graphical
> representation of the polyhedron** (Fig. 2, Application window A is mapped to
> the side of the Polyhedron). Col. 4, lines 10-59

Therefore, it would have been obvious to one of ordinary skill in the art, at the

time of invention, to modify the system of Florin with Freach's invention in order

to enable the viewer to conveniently follow/monitor/navigate through multiple

programs at the same time.

9.2.1. Regarding claim 55, the system of Florin and Freach discloses **displaying
the graphical representation of the polyhedron comprises rendering a
plurality of reduced resolution thumbnail video streams on different
sides of the polyhedron** (As shown in Fig. 2 of Freach, different sides of
the polyhedron 44 render different applications A,B,C which are the

disclosed video streams of Florin) **Wherein each of the plurality of reduced resolution thumbnail video streams corresponds to a different channel** (as tuned by the tuner of Florin)**, and wherein the different sides of the polyhedron are rendered on different portions of the electronic programming guide (EPG) display, the different portions being simultaneously visible and having different sizes and shapes in the electronic programming guide (EPG) display** (As shown in Fig. 2, polyhedron 44 depicts the program channels as disclosed by Florin, while various area of the EPG (display 40 of Florin) may show other components/ programs.

9.2.2. Regarding claim 59, the system of Florin and Freach discloses **wherein each side of the polyhedron corresponds to a different video channel having a different video stream** (as analyzed for claims 17, and 55; The sides A,B,C of Freach's Fig. 2 are mapped with the video application of Florin) **, the method further comprising:**

receiving a user command to rotate the graphical representation of the polyhedron (as shown in Freach's Fig. 6, the polyhedron is rotated on command; Col. 5, line 38 through Col. 6, line 13)**; and**

updating the EPG display by rotating the graphical representation of the polyhedron so that one of the different selected

channels is displayed in the first of the individual image areas (which in turn updates representation of the polyhedron in Fig. 2 and all are updated. For example, side 46b of the polyhedron will be rendered with program D as in Fig. 6b, showing the rotation from left to right from Fig. 6a).

9.2.2.1.   Regarding claim 60, the system of Florin and Freach discloses **wherein each of the different video channels corresponding to the different sides of the polyhedron is a video channel selected by a user for displaying on the polyhedron, and wherein the video channels selected for displaying on the polyhedron are a subset of a larger number of video channels available to the user via the electronic programming guide** (Florin's Fig. 33 shows channels selected by the user, e.g. user's favorites, to be shown simultaneously from the universe of channels available on the EPG; See Col.20, lines 55- 62. This user interface is mapped to Freach's polyhedron representation as analyzed for claim 17).

9.2.2.2.   Regarding claim 61, the system of Florin and Freach discloses **wherein each of the different video channels corresponding to the different sides of the polyhedron is a preselected video channel selected by a head-end administrator of the electronic**

programming guide (Florin's Fig. 33 is also enabled to show a

category of programs preselected by the provider; Col. 20, lines 28- 31

and lines 51- 55. This user interface is mapped to Freach's polyhedron

representation as analyzed for claim 17).

9.2.3.   Regarding claim 63, the system of Florin and Freach discloses:

receiving a user command to perform at least one of moving

the graphical representation of the polyhedron and resizing the

graphical representation of the polyhedron (as shown in Freach: Fig.

4, the polyhedron can be moved to different areas of the workspace/ EPG;

Col. 5, lines 19- 37)**; and**

updating the EPG display in response to the user command

(any such movements will update the EPG display with the new

coordinate information)**, the updating comprising at least one of:**

moving the graphical representation of the polyhedron

to a different one of the individual image areas (Freach: Fig. 4,

as analyzed above) **in the display of the electronic**

programming guide, and

changing the size of the graphical representation of the

polyhedron within the display of the electronic programming

guide (Freach further teaches that the size of the Polyhedron my

be changed/ customized as shown in Fig. 7d, 72; Col. 6 line 32
through Col. 7, line10) .

9.3. Computer code claim 31 effectuating the method of claim 1 is rejected for by the
same analysis as claim 1.

9.3.1. Computer code claim 64 effectuating the method of claim 62 is rejected for
by the same analysis as claim 62.

10. Claims 52, and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over
Florin in view of Freach, in further view of Toklu et al., USPN 6,549,643 (hereinafter
"Toklu").

10.1.   Regarding claim 52, the system of Florin and Freach is silent on
**capturing the first portion of the first video stream comprises detecting a
scene change in the first video stream**.

However, Toklu discloses a key frame (snapshot) selection based on scene change detection (Col. 3, lines 10-16). Also see Shahraray's reference Abstract, Fig. 3 (cited by Toklu) copy of which were made of record in previous office action.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system of Florin and Freach with Toklu's invention (selecting snapshots based on scene changes in video stream) in order to select the best/ most appropriate snapshot to balance image quality with available resources (see also Toklu's abstract, 1st five lines).

10.2.   Regarding claim 54, the system of Oosterhout and Cove is silent on **a scene change detector configured to detect a scene change in the first video stream, wherein the electronic programming guide component is configured to capture the first portion of the first video stream based on a scene change detected in the first video stream.**

However, Toklu discloses a key frame (snapshot) selection based on scene change detection (Col. 3, lines 10-16). Also see Shahraray's reference Abstract, Fig. 3 (cited by Toklu) copy of which is also made of record and provided for applicant's convenience.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system of Florin and Freach with Toklu's invention (incorporating a scene change detector to select snapshots based on scene changes in video stream) in order to select the best/ most appropriate snapshot to balance image quality with available resources (see also Toklu's abstract, 1st five lines).

11. Claims 65, 66, 68, 69, 71, and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Florin in view of Freach, in further view of Miller, USPN 6,597,358 (hereinafter "Miller").

11.1.   Claim 65 differs from claim 1 in that **said displaying comprises displaying a plurality of graphical representations of polyhedrons** in the individual image areas in the electronic programming guide. The system of Florin and Freach is not explicit on displaying multiple polyhedrons (for example, Freach only shows one polyhedron in Fig. 2).

However, Miller discloses a user interface enabled to show multiple polyhedrons (Fig. 7) each with its own unique applications renderings (Col. 7, lines 13- 45).

Therefore, it would have been obvious to one of ordinary skill in the art, at the
time of invention, to modify the system of Florin and Freach with Miller's invention
in order to provide the viewer with the convenience/ choice of multiple three
dimensional representation of desired commands/ movies.

11.1.1.   Claim 66 is rejected by the same analysis as claim 1, as we shown
        how various channels/ programming/ applications are mapped to various
        sides of the polyhedron.

11.2.   Claim 68 differs from claim 17 in that **said displaying comprises
     displaying a plurality of graphical representations of polyhedrons** in the
     individual image areas in the electronic programming guide. The system of
     Florin and Freach is not explicit on displaying multiple polyhedrons (for example,
     Freach only shows one polyhedron in Fig. 2).

However, Miller discloses a user interface enabled to show multiple polyhedrons
(Fig. 7) each with its own unique applications renderings (Col. 7, lines 13- 45).

Therefore, it would have been obvious to one of ordinary skill in the art, at the
time of invention, to modify the system of Florin and Freach with Miller's invention

in order to provide the viewer with the convenience/ choice of multiple three

dimensional representation of desired commands/ movies.

11.2.1.   Claim 69 is rejected by the same analysis as claim 17, as we

shown how various channels/ programming/ applications are mapped to

various sides of the polyhedron.

11.3.   Claim 71 differs from claim 31 in that **said displaying comprises

displaying a plurality of graphical representations of polyhedrons** in the

individual image areas in the electronic programming guide. The system of

Florin and Freach is not explicit on displaying multiple polyhedrons (for example,

Freach only shows one polyhedron in Fig. 2).

However, Miller discloses a user interface enabled to show multiple polyhedrons

(Fig. 7) each with its own unique applications renderings (Col. 7, lines 13- 45).

Therefore, it would have been obvious to one of ordinary skill in the art, at the

time of invention, to modify the system of Florin and Freach with Miller's invention

in order to provide the viewer with the convenience/ choice of multiple three

dimensional representation of desired commands/ movies.

11.3.1.   Claim 72 is rejected by the same analysis as claim 31, as we

shown how various channels/ programming/ applications are mapped to

various sides of the polyhedron.

12. Claims 67, and 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Florin in view of Freach, in further view of Hsieh et al., USPN 5,883,640 (hereinafter

"Hsieh").

12.1.   Regarding claim 67, the system of Florin and Freach is silent on **using a**

graphics accelerator to map the reduced thumbnail videos to the side of the

graphical representation of the polyhedron.

However, Hsieh discloses using graphics accelerators to implement

computational intensive tasks such as rendering blits, polygons, text rasterization

(Col. 1, lines 35- 46).

Therefore, it would have been obvious to one of ordinary skill in the art, at the

time of invention, to modify the system of Florin and Freach with Hsieh's

invention in order to improve system performance and response time.

12.2.   Claim 70 is rejected by the same analysis as claim 67.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

13.1.   Yeo et al., USPN 6,870,573, further discloses receiving streams of video

content, capturing frames, and producing a mosaic of low resolution real time

representation of said channels as selected by the viewer. See Abstract, Figs. 4,

5, and 9

Contacts

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to JAMES R. MARANDI whose telephone number is

(571)270-1843. The examiner can normally be reached on 8:00 AM- 5:00 PM M-F,

EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John W. Miller can be reached on (571) 272-7353. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John W. Miller/
Supervisory Patent Examiner, Art Unit 2421

/James R. Marandi/
Examiner, Art Unit 2421